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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/679,298	10/07/2003	Tetsuya Kanemaru	053466-0372	3585

22428 7590 04/27/2005

FOLEY AND LARDNER
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3000 K STREET NW
WASHINGTON, DC 20007

EXAMINER

VANIK, DAVID L

ART UNIT	PAPER NUMBER
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1615

DATE MAILED: 04/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/679,298

Applicant(s)

KANEMARU ET AL.

Examiner

David L. Vanik

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 1-5 and 12-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Receipt is acknowledged of applicant's Response to Election/Restriction filed on 4/8/2005.

Election/Restrictions

Applicant's election without traverse of claims 6-11 in the reply filed on 4/8/2005 is acknowledged. Newly submitted claim 20 is directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: Elected claims 6-11 are directed to a **process** for producing silicon-treated powder whereas newly submitted claim 20 is drawn to a silicone-treated powder **composition**. Accordingly, claim 20 is withdrawn from consideration as being directed to a non-elected invention.

Priority

Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 119 (b) as follows: Applicant failed to provide an English translation of foreign application JP 2000-10146. As such, the priority date of the instant application is interpreted as being 1/4/2001.

Claim Rejections - 35 USC § 102

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

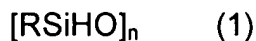
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 6-11 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 5,635,250 ('250).

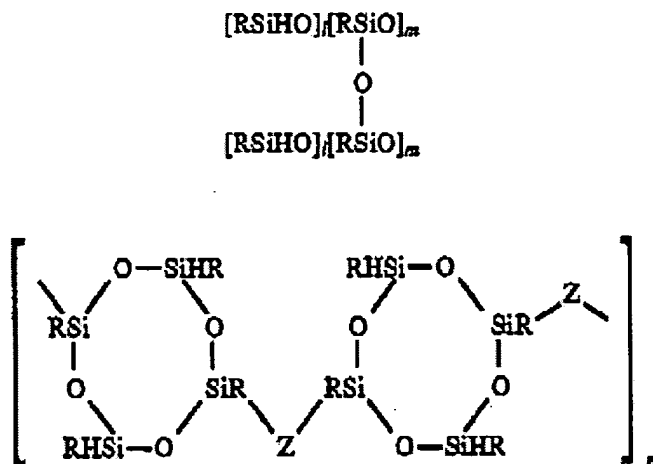
'250 disclose a method of coating a nanoparticle or powder with various silicon-based materials (abstract, Table 1, column 15, lines 38-58, column 17, lines 27-34).

Depending on the preferred application, the powder substance is between 0.01 and 100 μ M (column 17, lines 27-34). The silicon precursors used to coat the powder contain at least one Si-H group and are represented by the following structural formula:



Because a and c in the formula of the instant claim 8 can be zero, formula (1) above reads on claim 8. Specific examples of chemical precursors used to coat a powder are as follows (Table 1):

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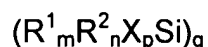
According to '250, the powder substance can be coated with a silicone-based material via pyrolysis at a temperature range between 300°C - 900° C (column 15, lines 35-63 and column 18, lines 60-65). The pyrolysis temperature can also be changed with the type of coating that is desired (column 15, lines 59-60). The process of coating a powder with a silicone material can also be carried out in the presence of gas (column 14, lines 54-65). The heating rate of the pyrolysis step can range between 0.1°C - 10°C per minute, based on the desired application (column 15, lines 45-47 and Table 7). Thus, it would take approximately 70 minutes to complete the pyrolysis step if the silicon coated powder was heated from 0 to 350°C at a rate of 5°C/minute.

The claims are therefore anticipated by US Patent 5,635,250 ('250).

Claims 6-11 are rejected under 35 U.S.C. 102(e) as being anticipated by US Publication US 2002/0142094 A1 ('094).

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'094 disclose a powder comprising a silicone polymer layer attached to a particle (abstract). The silicone polymer layer can be contacted to a particulate material with a mean particle size between 0.01 μM to 10,000 μM (paragraph 0031). The silicone layer used to coat the powder contain can contain Si-H groups (paragraph 0011) and is represented by the following structural formula:



where R^1 and R^2 can be hydrogen, and X can be oxygen (paragraphs 0036 and 0037). When producing the silicon-based powder, the silicon can be contacted with the powder and heated at a temperature of 150°C - 900°C at a time range between 1 minute and 24 hours (paragraph 0101). The process of coating a powder with a silicon material can also be carried out in the presence of gas (paragraph 0101).

The claims are therefore anticipated by US 2002/0142094 A1 ('094).

Correspondence

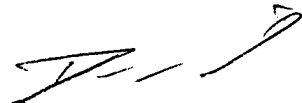
Any inquiry concerning this communication or earlier communications from the examiner should be directed to David L. Vanik whose telephone number is (571) 272-3104. The examiner can normally be reached on Monday-Friday 8:30 AM - 5:00 PM.

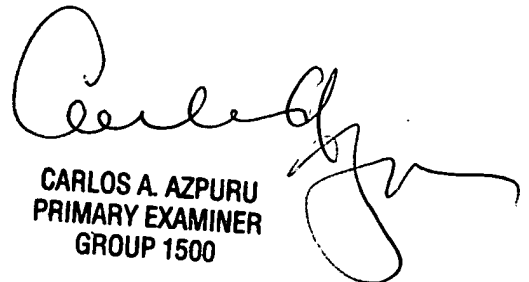
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carlos Azpuru, can be reached at (571) 272-0588. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David Vanik, Ph.D.
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4/21/05


CARLOS A. AZPURU
PRIMARY EXAMINER
GROUP 1500